**All Crossed Up!**

Ted is a breeder and wants to breed his dogs, Tigger and Tina to make puppies. Tigger and Tina are brother and sister dogs, from the same litter. Both have dark brown, shaggy hair.

Their father, who had dark brown shaggy hair, came from a long line of dogs all of whom had dark brown and shaggy hair.

Their mother, who had golden smooth hair, came from a long line of dogs, all of whom had golden and smooth hair.

Ted wants to breed puppies for sale. He knows that dark brown, smooth coats are the most desirable by dog lovers and will make him the most money. **What is the probability that the puppies of Tigger and Tina will have dark brown, smooth coats?**

**NOTE**: The Shaggy hair gene and the Dark hair gene are said to assort *independently.* That means that whether a dog has shaggy/smooth hair has NO EFFECT on whether it has dark/light hair, and vice versa.